

January Members' Meetings

Dates & Times

Matinee 2:30 p.m., Wednesday, January 12
Evenings, 8:00 p.m., Wednesday and
Thursday, January 12 and 13, 1983

Place

May Treat Morrison Auditorium

Speaker

Professor Richard Eakin

Subject

"The World of Electron Microscopy"

There is a wondrous and beautiful world to be discovered under the electron microscope and Dr. Richard Eakin, Professor Emeritus of Zoology, University of California, Berkeley, who is a pioneer in electron microscopy will share this world with Academy members at the January meetings. In studying the eyes of invertebrates (snail, jumping spider, jelly-fish, etc.) and the "third eye" of certain lizards by electron microscopy he has found beauty of organization and remarkable diversity - the hallmarks of nature. In this lecture Professor Eakin will show slides of various light-sensitive cells, called photoreceptors, taken with an electron microscope, describe their unique features, and comment on their functions and their evolutionary significance.

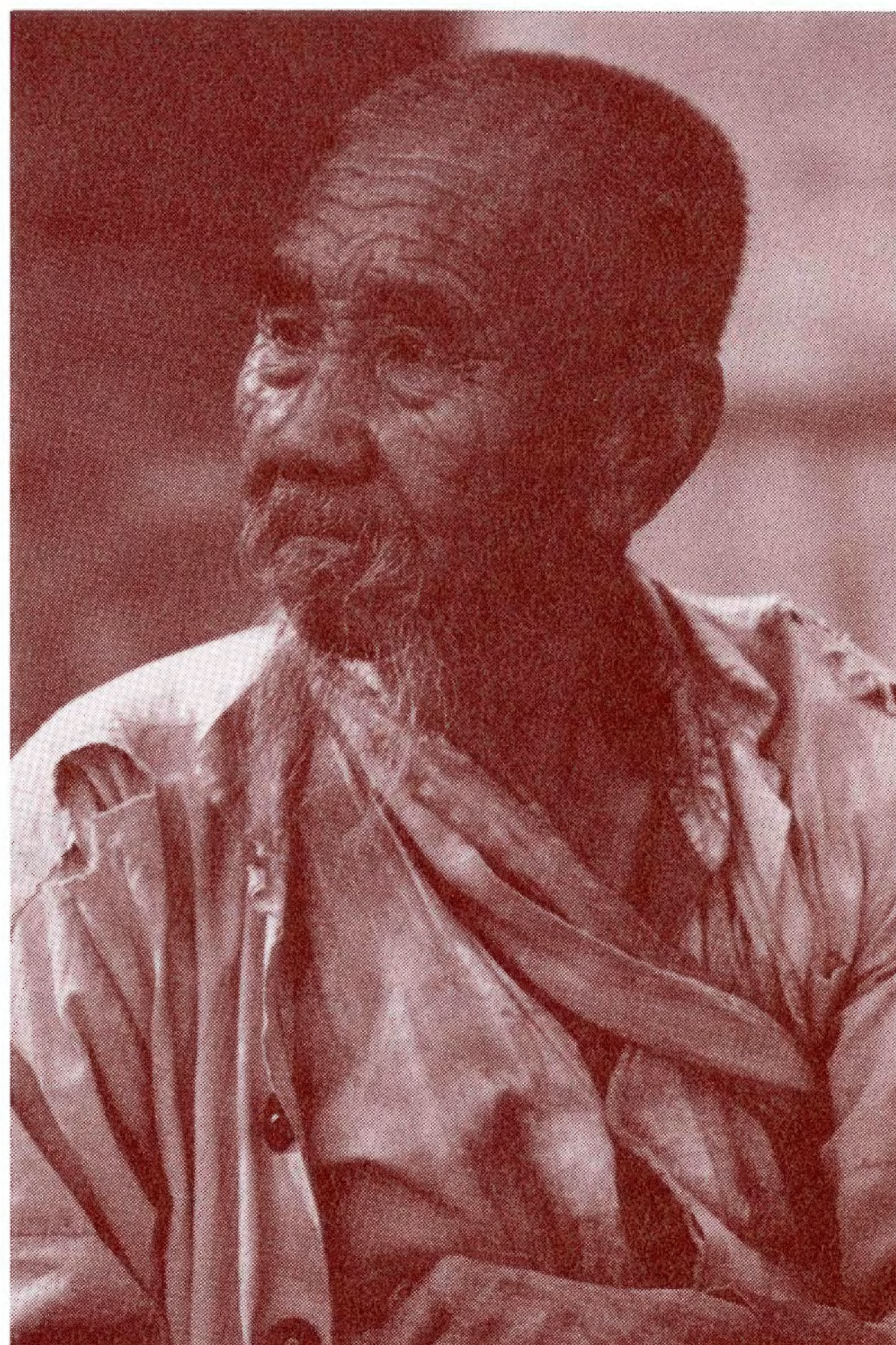
Professor Eakin, a nationally renowned lecturer, is famous for the lucidity of his oral presentations of research papers. He received the First Citation for Distinguished Teaching at the University of California, Berkeley, and the Associated Students of the University of California Award for Distinguished Teaching, and in 1975 published a book of his lectures entitled "Great Scientists Speak Again". Dr. Eakin is a Fellow of the California Academy of Sciences.

Don't miss this unique opportunity to hear Professor Eakin on January 12 or 13.

As usual, your membership card will admit you to the Academy's main entrance at Cowell Hall, and through the Wattis Hall entrance for the matinee presentation. Please be prepared to show your card at the auditorium door for the afternoon meeting.

SNEAK PREVIEW: "Dangerous Marine Creatures: Things That Bite, Sting and Poison" by Dr. Bruce Halstead on February 9 & 10.

Special Exhibits



A new exhibit opens January 24 in Cowell Hall entitled **Images of China**. This collection of color photographs was taken by John C. Galante in the People's Republic of China in the Fall of 1980. Galante was a member of the Oceanic Society Delegation invited by the Chinese Society of Oceanography to study mariculture and aquaculture techniques as practiced by the Chinese since 500 B.C. These photos, which were taken in areas rarely, if ever, visited by tourists portray that special harmony between man, his labor, and his environment as it has existed since time immemorial. John Galante, a native of San Francisco, is the grandson of Edward Hohfeld to whose memory the Hall of Science at the Academy is dedicated. (Through March.)

Other continuing exhibits include **The Eye of Science** (through January 30), **The Wildlands and Wildlife of California**, a photographic tour of seven diverse areas of California by Tupper Ansel Blake (through January 31), **The Heritage of Islam** (through January 2); **Blue Water Plankton** (through January 16); and **Hopi Kachina: Spirit of Life**, the Academy's own exhibit about the oldest surviving culture of North America.

Morrison Planetarium

Once upon a time, three princes of Serendip made an exotic pilgrimage to find 100 lines of magic verse. The verse was never found, but in the process of searching for it, many unexpected and wondrous discoveries were made.

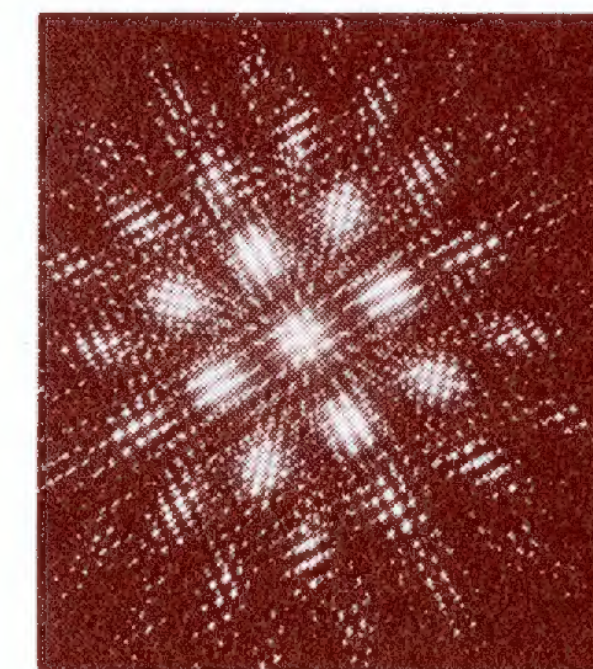
Ever since this 18th century folk tale was written, unexpected discoveries have been called serendipity. There have been many episodes of serendipity throughout the history of science, especially the science of astronomy. The invention of the telescope, the discovery of Uranus, the first measurement of the speed of light, the birth of radio astronomy, and the discovery of gamma rays coming from deep space were all the result of lucky accidents. Join us as we follow the trails to these and other unforeseen discoveries at **Celestial Serendipity**, the exciting new sky show in Morrison Planetarium.

Showtimes: Daily at 2:00 p.m., Saturday and Sunday at 12:30, 2:00 and 3:30 p.m., and Wednesday and Thursday evenings at 7:30.

Celestial Serendipity opens January 7 and will continue through April 24. *The planetarium will be closed January 3 through 6.*

On weekends see **Exploring the Skies of the Season**, an enjoyable tour of the night sky over San Francisco. Every Saturday and Sunday at 11:00 a.m. Members may use their complimentary passes for free admission to both of these shows.

Laserium



After a 2½ year absence **Laserium** is returning to the Morrison Planetarium! **Laserium**, seen by 12 million people in England, Canada and the United States is the ultimate cosmic laser concert, performed live in

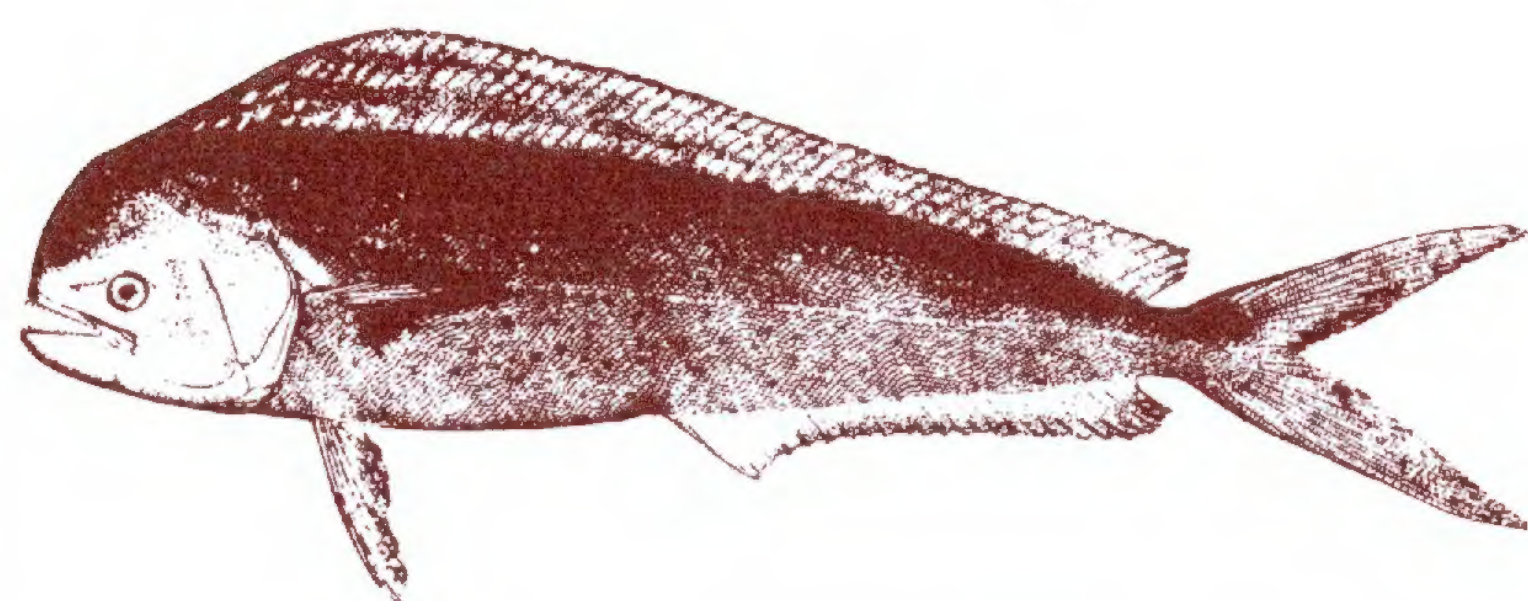
the planetarium's indoor sky theater. Brilliant, colorful images, created with a powerful krypton laser, seem to pulsate float and dance to great music against a background of stars.

Laserium will present several different shows during the coming year. For January showtimes are: "Laser-Rush" - Thursday at 9:00 p.m., Friday and Saturday at 7:30, 9:00 and 10:30, and Sunday at 7:30 and 9:00 p.m. "Crystal Odyssey" on Saturday and Sunday at 5:00 p.m.

Programs for January are subject to change without notice so please call 221-5100 for exact titles and showtimes.

Admission is \$4.50 for adults, \$3.50 for matinees (5:00 p.m. only), children 12 and under and seniors \$2.50.

Members are reminded that their complimentary planetarium passes are *not* good for Laserium.



If you saw one in Mexico, it would be a dorado; if you saw one in Italy it would be a pompano; and when you see one in the states, it is usually on a dinner plate and is called mahi mahi. Now you can see one in tank #14 at Steinhart Aquarium, a young and rapidly growing dolphin fish (not the mammal) brought in from the Waikiki Aquarium in Honolulu. Our sister aquarium there has been breeding mahi mahi in captivity and have kindly shared their bounty.

The scientific name for this specimen is *Coryphaena hippurus*, named in 1758 by Linnaeus, the Father of our system of binomial classification. Dolphin fish grow at an amazing rate, about 1 mm per day when young, and about 10 cm per month as it gets older. The forehead slopes into a long dorsal fin which gives this fish the perfect shape for fast swimming in the open ocean. The vivid silver, blue-green color of a mature dolphin fish has been described as "The rainbow's offspring, where it met the ocean."

The flashlight fish which used to be in this tank are now in tank #1. In their new home you can catch a glimpse of their size and shape and still see the blinking green lights beneath their eyes. (More on flashlight fish next month!)

Special Lecture

FEATHERS

David Cavagnaro
Wednesday, January 19
8:00 p.m.
Morrison Auditorium

"Feathers insulate, waterproof, camouflage, and alarm: they adorn, court, attract, and repel. Most glorious of all they can float through the heavens with the lightness of passive thistledown yet be driven toward incredible achievements by that passion for action only animals can manifest."

—David Cavagnaro
"Feathers"

Photographer and author David Cavagnaro has long been intrigued by the natural world and has, over the years, explored this world with remarkable sensitivity through the lens of a camera. He is well-known to Academy members. Most recently, in October, 1982, an exhibit of his photos and those of fellow-photographer Frans Lanting were combined to create a visually powerful tribute to birds in the exhibit, "Flight". These splendid images by Cavagnaro and Lanting have been assembled into a book, with text by David Cavagnaro. Join David as he explores the tremendous diversity of feathers and explains the evolution of his book from thought to stunning completion.

Copies of "Feathers" will be available for sale following the lecture.

The Dr. Barbara Sawyer Memorial Wildlife Conference on

R A P T O R S



Saturday and Sunday
February 5 and 6, 1983
9:00 a.m. - 5:00 p.m. each day
Morrison Auditorium
California Academy of Sciences
Special Workshop at the Zoo
Friday, February 4
7:00 p.m. - 10:00 p.m.

The 7th Annual Wildlife Conference, sponsored by the California Academy of Sciences, the San Francisco Zoological Society, and The Wildlife Rehabilitation Council, will consist of scientific presentations and workshops on raptors. Topics to be covered on a variety of birds of prey include captive breeding, rehabilitation, handling, housing, nutrition, veterinary techniques and infant care.

This program is for the professional and the serious ornithologist.

SPECIAL WORKSHOP AT THE ZOO Handling and Housing for Rehabilitation in Birds of Prey

Friday, February 4
from 7:00 to 10:00 p.m.

John Aikin, *Raptor Research Assistant, San Francisco Zoological Society*

Dr. Craig Machado, *Veterinarian, San Francisco Zoological Gardens*

Gail Headberg, AHT, *Veterinarian Laboratory Technician, San Francisco Zoological Gardens*

Ron Martorana, AHT, *Veterinarian Laboratory Technician, San Francisco Zoological Gardens*

The 3 hour workshop will focus on the problems involved in dealing with birds of prey that come in for rehabilitation. Handling demonstrations will be given. Housing will be covered. The workshop is for those who have a professional interest in the subject. Pre-registration is necessary and registration will be limited.

PROGRAM Saturday, February 5, 1983

Professor Doug Cheeseman
"Raptor Ecology - An Overview"

Donald Schlorff, Wildlife Biologist, California Department of Fish and Game

"A Management Plan for the Raptors of California - Past, Present and Future"

David Harlow, Endangered Species Coordinator, U.S. Fish and Wildlife Service

"A Management Plan for the Peregrine Falcon"

Phillip Dietrich
"The Bald Eagle of California"

Glenn Stewart, Biological Technician, Bureau of Land Management

"A Reintroduction Plan in the Southwestern United States for Harris' Hawks"

Brian Walton, Coordinator, University of California, Santa Cruz Predatory Bird Research Group

"Management Techniques for Populations of Raptors Including Captive Breeding"

Dr. Murray Fowler, School of Veterinarian Medicine, University of California at Davis

"Treatment of Stress in Raptors"

Terry Schultz, Supervisor, Raptor Center, University of California at Davis

"Conditioning Raptors for Rehabilitation"

Dr. Richard Olendorff, Endangered Species Coordinator, U.S. Bureau of Land Management

"Raptor Management -The State of the Art"

PROGRAM Sunday, Febraury 6, 1983

Lloyd Kiff, Curator, Western Foundation Vertebrate
"History and Natural History of the California Condor"

Richard Howard, Biologist, U.S. Fish and Wildlife Service
"Management Considerations for the Raptors of the Snake River"

Dr. Eric Wheeldon, Smith Kline Laboratory
"Causes for Mortality in Raptors in the Central Valley 1975-1980"

Edward Latrell, Pathologist, California Department of Fish and Game

"Causes of Mortality in Certain Populations of California Raptors"

Gary Bogue, Wildlife Systems
"Housing"

Dr. James Harris, Veterinarian
"Initial Examination and Preparation for Surgery"

Dr. Sandra Emanuelson, Veterinarian, Cottage Lane Veterinary Clinic

"Nutritional Considerations of Captive Raptors"

Dr. Pat Gulette, Veterinarian, California Department of Fish and Game

"Criteria for Euthanasia"

John Aikin, Raptor Research Assistant, San Francisco Zoological Gardens

"Criteria for Release"

TICKET INFORMATION AND RESERVATION FORM

The California Academy of Sciences, The San Francisco Zoological Society, and The Wildlife Rehabilitation Council present The Dr. Barbara Sawyer Memorial Wildlife Conference on

R A P T O R S

Tickets and a detailed agenda are available with this registration form. Reservations will be accepted in order of receipt and, unfortunately, telephone reservations cannot be accepted for this event.

TICKET ORDER FORM

Admission: Members of sponsoring organizations \$15
Non-members \$20

Please mail this form with a check made payable to THE SAN FRANCISCO ZOOLOGICAL SOCIETY and a self-addressed, stamped envelope to:

Nancy Venizolos
The San Francisco Zoological Society
Sloat Blvd. at the Pacific Ocean
San Francisco, CA 94123

NAME _____

ORGANIZATION _____

ADDRESS _____

ZIP CODE _____

DAYTIME TELEPHONE # _____

Tickets @\$15 _____

Tickets @\$20 _____

Total amount enclosed _____

I will attend the Friday night workshop:
yes ☐ no ☐

NO REFUNDS/NO EXCHANGES

Education and Travel

Baja California Circumnavigated

January 22 - February 4

Cruising aboard the comfortable *M.V. Northwest Explorer*, members will sail into the Sea of Cortez under the leadership of Dr. Joseph Hall, professor of mammalogy, and Fellow of the Academy of Sciences. Rounding the tip of the Peninsula, the boat will travel northward to the whale lagoons of the west coast for some "close encounters" with California gray whales and to the San Benitos Islands to view huge colonies of elephant seals. Costs range from \$2650 - \$3680 plus air fare to San Diego. For information, call the Academy Travel Office at (415) 221-5100.

Ethiopia, Egypt and The Red Sea

March 6 - 29

The grandeur of ancient civilizations and a variety of contemporary cultures are the focus of this extraordinary tour, planned especially for Academy members. Picturesque Ethiopia is our first destination as we visit Addis Ababa, Lake Tana - source of the Blue Nile, and a village of Falashas, a distinct ethnic group who practice an archaic form of Judaism. Two days are spent in Cairo before boarding the *M.S. Lindblad Polaris* for a cruise through the Red Sea. Snorkelers will enjoy the abundant marine life in the Gubal Islands and at Hurghada. Costs range from \$2970 to \$4540 plus air. For information, please call the Academy Travel Office at (415) 221-5100.

King Range Backpack

April 24 - 28

Northern California's King Range Beach is a remote and beautiful 24-mile stretch of pristine black sand. Academy members will hike the area, north to south, between the Mattole River and Shelter Cove, encountering marine mammals, birds, intertidal life, coastal plants and wildflowers. Anyone capable of hiking five miles a day, carrying approximately 30 pounds in a backpack, can handle this trip. Cost is \$185 per person. For information, please call Focus On Nature at (707) 584-5154.

Belize for Scuba Divers

May 7 - 14

Some of the richest and most pristine dive sites in the Caribbean lie off the coast of Belize (formerly British Honduras), south of

Mexico on the Yucatan Peninsula. Sixty miles out to sea at Lighthouse Reef are dozens of dive sites where the top of the drop-off is a mere 30 feet below the surface. Led by Academy marine biologist, Brian Gibeson, members will stay aboard the comfortable *Isla Mia*. (This trip is limited to 14 divers). Cost is \$950 plus air fare. For information call See & Sea Travel at (415) 771-0077.

Spain and Morocco

May 14 - June 5

Members will enjoy a wealth of Islamic art history and architecture on this 23-day tour of Spain and Morocco, led by Antony Hutt, an Islamic scholar, who has led numerous archaeological expeditions in the Middle East. Highlights of the tour will include the sights of Madrid, El Escorial, Segovia, Toledo, and the splendors of the Alhambra and the Alcazar. Members will travel to Morocco to visit Rabet, Fez, Meknes, and will cross the Atlas Mountains to Erfoud, the gateway to the Sahara. The cost is \$2500 per person for land arrangements, and \$908 for air fare. For information, please call Siemer & Hand Travel at (415) 788-7186.

Snake River Birds of Prey Expedition

May 30 - June 4

Raptor lovers will not want to miss this six-day field study tour into the scenic Snake River Birds of Prey Area. The densest known nesting population of birds of prey, including 14 species of falcons, eagles, hawks, owls and more than two hundred pairs of the rare prairie falcon, live in the Snake River canyon. From home base in Boise, outings will be by van and by foot, plus two "day" float trips on the Snake River. Cost is \$690 plus air fare. For information, call Betchart Expeditions at (408) 245-9517.

Alaska

June 18 - July 3

Spectacular scenery and abundant wildlife await Academy members on this annual trip north to Alaska. A cruise to the Columbia Glacier, several days at Camp Denali in the heart of Mt. McKinley National Park, a visit to the "Valley of Ten Thousand Smokes" and some time in Glacier Bay are but a few of the highlights of this popular members tour. Dr. David Kavanaugh, Chairman of the Department of Entomology, will lead this expedition. For information and a brochure, please call Siemer & Hand Travel at (415) 788-7186.

No. 517

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